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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NGUYEN, KEVIN M

ART UNIT PAPER NUMBER

2674

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/032,863

Applicant(s)

GRIGOR ET AL.

Examiner

Kevin M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24,29-33,38-48,49-53 and 56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24,29-33 and 38-48 is/are allowed.
- 6) ☒ Claim(s) 49-53 and 56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is ^{accepted} ~~objected~~ to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is made in response to applicant's amendment filed on 03/25/2005. Claims 1-23, 25-28, 34-37, 54, 55 are cancelled, claim 56 is new, and claims 24, 29-33, 38-53, 56 are currently pending in the application. An action follows below:

2. (Original) Claims 24, 29-32, 33, 38-48 are allowed.

Allowable Subject Matter

3. (Original) The following is an examiner's statement of reasons for allowance:

Zenda (US 4,980,678), Zenda (US 5,559,525), and Ranganathan (US 5,764,201), the cited prior arts, alone or in combination, do not teach or fairly suggest

Claims 24 and 33 recited

a video graphics processing circuits associated with a digital storage medium,
the video graphics processing circuits comprises

a processing unit, and

memory operately coupled to the processing unit, wherein the memory stores programming instructions that when executed by processing unit, cause a coupling controller of the processing unit to (b) determine whether the display preferences can be fulfilled in observance of at least one of: configuration properties of the multiple displays and configuration properties of a computing system, the coupling controller determining whether a current configuration of the multiple displays to the computing system can be reconfigured such that the display preferences can be fulfilled while maintaining

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effective configuration of the current configuration when the display preferences cannot be fulfilled.

Claim 42 recited

A video graphics processing circuit for displaying at least one image on a plurality of displays, comprising

a coupling controller operably coupled to receive display preferences and to determine

whether the display preferences can be fulfilled in observance of configuration properties, the display preferences including at least one of displaying an image on more than one of the displays, displaying separate images on each of the displays, displaying a portion of the image on one of the displays and displaying the image on another one of the multiple displays, providing different refresh rates for at least two of the displays, providing different resolutions for at least two of the displays, selecting one of the displays to display a predetermined type of image, and displaying a first portion of image on a first one of the displays and displaying a second portion of the image on a second one of the displays;

and wherein the coupling controller provides reconfiguration requirements to the coupling module when the display preferences cannot be fulfilled but a current configuration of the plurality of display controllers to the at least one display can be reconfigured such that the display preferences can be fulfilled while maintaining effective configuration of the current configuration.

These distinct features have been added to the independent claims 24, 33 and 42 and render the above limitations allowable.

4. However, upon further consideration, claims 49-53 have been rejected in view of the newly discovered references to Zenda (previously cited, US 5,559,525) and Ranganathan (newly cited, US 5,764,201). Rejections based on the newly cited references follow.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 49, 50, and 53 are rejected under 35 U.S.C. 102(b) as being anticipated by Zenda (US 5,559,525).

7. (Original) As to claims 49, 50, 53, Zenda '525 teaches a video graphics processing apparatus comprising

screen memory comprising a RAMDAC 93 and a RAMDAC 111 (fig. 3A) (a plurality of screen memory portions);

a first display controller 87, a color LCD controller 95, and a second display controller 109 (fig. 3A) (a plurality of display controllers), the second display control 109 selects the digital color data supplied from the RAMDAC 111 (col. 9, lines 31-33), the second display controller 109 output display data to be displayed on the color CRT display unit 107 (col. 9, lines 13-15).

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a color CRT 89, a color LCD 91, and a color CRT 107 (fig. 3A) comprise inherent a plurality of display drivers;

a feature connector 103, and a Z connector 105 (fig. 3A) (a coupling module), an analog switch 97 (fig. 3A), a selector 113 (fig. 3A) (switching);

a coupling controller is defined by a selector 113 in fig. 7 comprising three selectors;

the configuration properties are defined by different resolution recited in col. 9, lines 11-13, and different type of displays CRT and LCD;

changeover signal 115 inputs to a controller EN (see fig. 7) defined a coupling controller, the controller EN controls three selectors (see fig. 7);

According to the teaching of Zenda recited "the selector 113 is connected to the first display controller 87 by the feature connector 103, and to the color LCD control 95 by the Z connector 105 (fig. 7, col. 9, lines 27-30). A color LCD panel 91 (a first display driver) is a standard component of the portable computer and connected to the color LCD control 95 (col. 8, lines 28-30)" meet the claimed limitation "means for causing the coupling controller to couple a first display driver of the plurality of display drivers to a first and a second screen memory portion"; for example, fig. 7 discloses color display controller 95 connected to LCD 91 (a first display driver) coupling to a digital signal from RAMDAC 111 (a first screen memory portion) and an analog signal from RAMDAC 111 (a second screen memory portion).

8. (Original) As to claim 50, Zenda teaches the configuration properties are defined by different resolution recited in col. 9, lines 11-13, and different type of displays CRT

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and LCD in Fig. 7. Fig. 7 further selector 113 (coupling controller) discloses a LCD display controller 95 and a color CRT 107 coupling to a digital signal from RAMDAC 111 (a first screen memory portion).

9. (Original) As to claim 53, Zenda teaches the selector 113 (the coupling controller, fig. 7) coupling from first display controller 87 (fig. 7) to a LCD display 91 via LCD controller 95 (fig. 7) and CRT 107 (fig. 7).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 51 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zenda in view of Ranganathan (US 5,764,201).

12. (Original) As to claim 51, Zenda '525 teaches all of the claimed limitation of claim 49, except for a user interface coupled to the coupling controller, the user interface entering display preferences for the plurality of displays.

Ranganathan teaches a laptop PC 20 in fig. 9 allows different refresh rates to be used for high-resolution CRT 24' and the lower-resolution LCD panel 22 (col. 11, lines 16-20). Accordingly, the laptop PC 20 comprising inherent a keyboard (a user interface) entering display preferences (different refresh rates, high-resolution, lower-resolution, simultaneously images, different images see figs. 10A, 10B, and 10C, col. 10, lines 60-65).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide Zenda's laptop (fig. 23A) including a function of the laptop PC 20 in fig. 9 allows different refresh rates to be used for high-resolution CRT 24' and the lower-resolution LCD panel 22, in view of the teaching in Ranganathan's reference because this would reduce flicker and meets ergonomic standard (col. 2, lines 67), while fabricating the dual graphics controller can be placed in a standard laptop PC with minimal added cost as taught by Ranganathan (col. 11, lines 57-59).

13. (Original) As to claim 52, Ranganathan teaches a laptop PC 20 comprising a memory 56 (fig. 6, the screen memory) allows different refresh rates to be used for high-resolution CRT 24' and the lower-resolution LCD panel 22 (col. 11, lines 16-20, the configuration properties).

14. (New) As to claim 56, Ranganathan teaches Fig. 7a showing the dual graphics controller (multiple display controllers as claimed) including simultaneous modes where the same image is displayed on both external CRT 24 and LCD panel 22 (see col. 7, lines 35-39).

Response to Arguments

15. Applicant's arguments filed 03/25/2005 have been fully considered but they are not persuasive.

16. In response to applicant's argument that claim 49 recites "a plurality of display controllers each retrieving display from the screen memory portion and simultaneously providing display data to at least on display associated with the screen memory portion."

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This argument is not persuasive because Zenda claims the flat panel display means and the CRT simultaneously display the second color data (see claim 8). Zenda further claims a second graphics subsystem generates second control signals and second color data (see claim 1). The claims 1 and 8 are interpreted in light of the specification at col. 14, lines 44-48 recited "the present invention is modified such as the first graphics subsystem is a VGA controller and the second graphics subsystem is a display controller". Therefore, multiple display controllers as claimed including simultaneous modes where the same image is displayed on both external CRT and LCD panel.

For these reasons, the rejections based on Zenda and Ranganathan have been maintained.

Conclusion

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Nguyen whose telephone number is 571-272-7697. The examiner can normally be reached on MON-THU from 8:00-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick N. Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the Patent Application Information Retrieval system, see <http://portal.uspto.gov/external/portal/pair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin M. Nguyen
Patent Examiner
Art Unit 2674

KMN
May 31, 2005


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PRIMARY EXAMINER